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By_____
Karen M. Forsyth



# AMENDMENT TRANSMITTAL LETTER

**Attorney Docket No.:** D/A0707
XERZ 2 00551

| | | |
|---|---|---|
| Serial No.: 09/750,425 | Filing Date: 12/28/2000 | Examiner: Tu T. Nguyen |
| Group Art Unit: 2877 | Invention: **SYSTEMS AND METHODS FOR FABRICATING AN ELECTRO-OPTICAL DEVICE USED FOR IMAGE SENSING** | |

To the Commissioner for Patents:

Transmitted herewith is an amendment in the above-identified application. The fee has been calculated as shown below.

CLAIMS AS AMENDED

| | Claims remaining after amendment | | Highest Number Previously Paid For | No. of Extra Claims Present | Rate | Additional Rate |
|---|---|---|---|---|---|---|
| Total Claims | 16 | Minus | 20 | 0 | X 18 | $ .00 |
| Indep. Claims | 4 | Minus | 3 | 0 | X 84 | $ .00 |

☒ No additional fee is required.

☐ A check in the amount of $____ is attached.

☐ Charge $___ to Deposit Account No. 24-0037.

☒ Applicants request any extensions of time that may be necessary and authorize the required fees be charged to Deposit Account No. 24-0037.

☒ Please charge any additional fees or credit overpayment to Deposit Account No. 24-0037.

Respectfully submitted,

FAY, SHARPE, FAGAN,
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Date: August 14, 2003

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | |
|---|---|---|
| INVENTOR(S) | : | Thomas J. Grimsley |
| TITLE | : | SYSTEMS AND METHODS FOR FABRICATING AN ELECTRO-OPTICAL DEVICE USED FOR IMAGE SENSING |
| APPLICATION NO. | : | 09/750,425 |
| FILED | : | December 28, 2000 |
| CONFIRMATION NO. | : | 7861 |
| EXAMINER | : | Tu T. Nguyen |
| ART UNIT | : | 2877 |
| LAST OFFICE ACTION | : | July 14, 2003 |
| ATTORNEY DOCKET NO.: | | D/A0707<br>XERZ 2 00551 |

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RESPONSE TO RESTRICTION REQUIREMENT AND AMENDMENT B**

Dear Sir:

Applicant has now had an opportunity to carefully consider the Office Action mailed July 14, 2003, on the above- referenced patent application.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks** begins on page 6 of this paper.

**AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings of claims in the application:

**LISTING OF CLAIMS:**

1. (Previously Presented) A method of fabricating an electro-optical device suitable for use in an image forming system, the method comprising the steps of:

embedding sensors in a substrate to form sensor areas, each sensor area substantially overlying an associated sensor, and a non-sensor area;

depositing a base layer over each sensor area and the non-sensor area;

applying a first filter layer on at least a portion of the substrate inclusive of the non-sensor area to at least partially planarize the device; and

applying a second filter layer over at least a portion of the substrate without removing the first filter layer from the non-sensor area.

2. (Previously Cancelled)

3. (Previously Presented) The method of claim 1, wherein, in the step of applying the base layer, the base layer is translucent.

4. (Previously Presented) The method of claim 1, further comprising the step of mounting the electro-optical device in the image forming system.

5. (Previously Presented) The method of claim 1, wherein, in the steps of applying the filter layers, at least one of the first and second filter layers contains a pigment.

6. (Previously Presented) The method of claim 1, further comprising the step of applying the second filter layer on at least a portion of the non-sensor area to at least partially planarize the device.

7. (Previously Presented) The method of claim 6, further comprising the step of applying a third filter layer over at least a portion of the substrate without

removing the second filter layer from the non-sensor area.

8. (Previously Presented) The method of claim 7, wherein, in the steps of applying the filter layers, the first filter layer corresponds to a first primary color, the second filter layer corresponds to a second primary color, and the third filter layer corresponds to a third primary color.

Claims 9 and 10 (Previously Cancelled)

11. (Currently Amended) A method of applying a filter layer of substantially uniform thickness for an image forming system, the method comprising the steps of:

providing a substrate containing at least a first photosensor and a second photosensor, the first photosensor positioned closer to a point of an initial filter application than the second photosensor; and

applying a first filter layer on the substrate inclusive of at least a portion of a non-sensor area of the substrate to create ~~an~~ uniform surface to deposit a second filter layer of the substantially uniform thickness over the photosensors, the non-sensor area being an area complimentary to each area overlying each photosensor.

12. (Previously Presented) The method of claim 11, further comprising the step of applying a base layer on the substrate before the step of applying the first filter layer.

13. (Previously Presented) An electro-optical device suitable for use in an image forming system, the device comprising:

a substrate;

a sensor embedded in the substrate forming a sensor area and a non-sensor area;

a first filter layer on at least a portion of the non-sensor area to at least partially planarize the device; and

a second filter layer applied over at least a portion of the substrate without

removing the first filter layer from the at least a portion of the non-sensor area.

14. (Previously Presented) The electro-optical device of claim 13, further comprising a base layer on the substrate.

15. (Previously Presented) A method of fabricating a color sensing semiconductor device comprising:

embedding at least a first sensor, a second sensor and a third sensor in a substrate;

the first sensor defining an associated first sensor area, overlying the first sensor, and a first non-sensor area, disposed near the first sensor area;

the second sensor defining an associated second sensor area, overlying the second sensor;

the third sensor defining an associated third sensor area, overlying the third sensor, and a second non-sensor area, disposed near the third sensor area;

depositing a first filter layer over the substrate, exclusive of the third sensor area;

depositing a second filter layer over the substrate, exclusive of the first sensor area; and

depositing a third filter layer over the substrate, exclusive of the second sensor area.

16. (Previously Presented) The method as set forth in claim 15, further including:

applying a clear base layer before depositing the first filter layer over the substrate.

17. (Previously Presented) The method as set forth in claim 15, further including:

removing the first filter layer from the non-sensor areas after depositing the second filter layer; and

removing the second filter layer from the non-sensor areas after depositing the third filter layer.

18. (Previously Presented) The method as set forth in claim 15, wherein the first filter layer corresponds to a first subtractive primary color, the second filter layer corresponds to a second subtractive primary color and the third filter layer corresponds to a third subtractive primary color.

19. (New) The method as set forth in claim 15, wherein the step of depositing the first layer over the substrate, exclusive of the third sensor area, further includes applying the first filter layer to at least partially planarize the device.

## REMARKS

In the Action of July 14, 2003, a Restriction Requirement was issued as follows:

Species I: (claims 1, 3-8, 11-14) argued as being related to fabricating the sensors with a planarizing layer.

Species II: (claims 15-18) argued as being related to fabricating the sensors without a planarizing layer.

It was argued that no generic claim currently existed.

Applicants respectfully traverse this position. Specifically, it is argued that the reason for the restriction requirement is that there are distinct species due to claims 15-18, claiming the fabrication of sensors "without a planarizing layer." However, this claim language does not specifically preclude the use of a planarizing layer. Rather, the claim is broad enough to cover both situations where there is or is not a planarizing layer. Therefore, this would in Applicant's belief, make this claim generic to the claims of Species I, as to the planarizing layer aspect. It is again noted that it is this planarizing aspect which was pointed to as the reason for the restriction requirement. If the Examiner does not accept this argument, Applicant request the Examiner amend claim 15 to incorporate the language of now-submitted new claim 19.

In either case, Applicant will elect claims 1, 3-8, and 11-14 for further prosecution in order to be responsive to this present Action. However, again, Applicant request, should Applicant's arguments not be accepted, that claim 15 be amended to include the aspects of claim 19.

No additional fee is believed to be required for this Response to Restriction Requirement and Amendment B. However, the undersigned attorney of record hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Mark S. Svat, at Telephone Number (216) 861-5582.

Respectfully submitted,

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